# Karnataka Material Test House Pvt. Ltd.,

**Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy**

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

| Report No: KMTH/C-Agg/98-11/2020-21 | Date | 05.01.2021 |
|---|---|---|

**TEST REPORT ON COARSE AGGREGATE**

| | |
|---|---|
| Name of Client | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. |
| Third Party Consultant | Karnataka Material Test House Pvt Ltd.,<br>Basaveshwara Layout, Nagashettihalli, Bengaluru-560094 |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Work order Number | BBMP/EE/YNK.D/W.O/187/2019-20 |
| Job Code No | 003-02-000070 |
| Client's letter dated | 03.01.2021 |
| Source of Sample | Supplied by the Client |
| No. of Sample* | Coarse Aggregate - 20mm |
| Date of Testing | 04.01.2021 |
| Technical Reference | IS: 2386 (Part I)– 1963 IS: 383 – 2016 |

***Gradation of 20mm Aggregate***

| 20mm | Weight of Sample in gm | | 5000 | | IS : 2386(Part-I) RA 2016 | | Remarks |
|---|---|---|---|---|---|---|---|
| Sieve No | Wt of Sample | % tage retained | Cumulative % retained | % tage finer | Single Size | Graded Size | |
| 40 | 0 | 0.00 | 0.00 | 100.00 | 100 | 100 | Sample conforms to IS: Stipulation for Single size Aggregate of size 20mm. |
| 20 | 480 | 9.60 | 9.60 | 90.40 | 85-100 | 90 to 100 | |
| 10 | 4475 | 89.50 | 99.10 | 0.90 | 0 to 20 | 25 to 55 | |
| 4.75 | 20 | 0.40 | 99.50 | 0.50 | 0 to 5 | 0 to 10 | |

* As furnished by the Client.

**For Karnataka Material Test House Pvt Ltd.,**

Prepared & Checked By
Nagaraj.K.S

Approved By
Narayanswamy.B

.....End of Report.....

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# Karnataka Material Test House Pvt. Ltd.,

Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

| Report No: KMTH/ C-Agg/99-11/2020-21 | Date | 05.01.2021 |
|---|---|---|

## TEST REPORT ON COARSE AGGREGATE

| | |
|---|---|
| Name of Client | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64 |
| Name of Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. |
| Third Party Consultant | Karnataka Material Test House Pvt Ltd.,<br>Basaveshwara Layout, Nagashettihalli, Bengaluru-560094 |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Work order Number | BBMP/EE/YNK.D/W.O/187/2019-20 |
| Job Code No | 003-02-000070 |
| Client's letter dated | 03.01.2021 |
| Source of Sample | Supplied by the Client |
| No. of Sample* | Coarse Aggregate - 20mm |
| Date of Testing | 04.01.2021 |
| Technical Reference | IS: 2386 (Part I)– 1963 IS: 383 – 2016 |

***Gradation of 40mm Aggregate***

| 40mm | Weight of Sample in gm | | 5000 | | IS : 2386(Part-I) RA 2016 | | Remarks |
|---|---|---|---|---|---|---|---|
| Sieve No | Wt of sample | % tage retained | Cumulative % retained | % tage finer | Single Size | Graded Size | |
| 63 | 0 | 0.00 | 0.00 | 100 | 100 | 100 | Sample conforms to IS: Stipulation for Single size Aggregate of size 40mm. |
| 40 | 586 | 11.72 | 11.72 | 88.28 | 85-100 | 90 to 100 | |
| 20 | 3682 | 73.64 | 85.36 | 14.64 | 0 to 20 | 30 to 70 | |
| 10 | 324 | 6.48 | 91.84 | 8.16 | 0 to 5 | 10 to 25 | |
| 4.75 | 6.8 | 0.14 | 91.98 | 8.02 | - | 0 to 5 | |

* As furnished by the Client.

For Karnataka Material Test House Pvt Ltd.,

Prepared & Checked By
Nagaraj.K.S

Approved By
Narayanswamy.B

.....End of Report.....

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

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# Karnataka Material Test House Pvt. Ltd.,

**Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy**

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

Report No: KMTH/M-Sand/139/2020-21

Date 14.01.2021

## TEST REPORT ON FINE AGGREGATES

| | |
|---|---|
| Name of Client & Address | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of Agency & Address | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Job Code No | 003-02-000070 |
| Client's letter dated | 12.01.2021 |
| Source of Sample | Supplied by the Client |
| No. of Sample* | Fine Aggregate- M-Sand |
| Date of Testing | 13.01.2021 |
| Technical Reference | IS: 2386 (Part I)– 1963 , IS: 383 – 2016 |

***Gradation of Fine Aggregate-M-Sand***

| Sieve No | Wt of sample | % tage retained | Cumulative % retained | % tage finer | Percentage passing for | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Zone I | Zone II | Zone III | Zone IV | |
| 10 | 0 | 0 | 0 | 100 | 100 | 100 | 100 | 100 | |
| 4.75 | 2.6 | 0.26 | 0.26 | 99.74 | 90 – 100 | 90 – 100 | 90 – 100 | 90-100 | |
| 2.36 | 240 | 24.00 | 24.26 | 75.74 | 60 – 95 | 75 – 100 | 85 – 100 | 95-100 | Falls in Zone – 1 as per Table 4 of IS-383 – 2016 |
| 1.18 | 248 | 24.80 | 49.06 | 50.94 | 30 – 70 | 55 – 90 | 75 – 100 | 90-100 | |
| 0.6 | 186 | 18.60 | 67.66 | 32.34 | 15 – 34 | 35 – 59 | 60 – 79 | 80-100 | |
| 0.3 | 124 | 12.40 | 80.06 | 19.94 | 5 – 20 | 8 – 30 | 12 – 40 | 15-50 | |
| 0.15 | 110.2 | 11.02 | 91.08 | 8.92 | 0 – 10 | 0 – 10 | 0 – 10 | 0-15 | |
| Silt content | | | | 3.12 | Shall not be more than 20% | | | | Passes the requirements |

* As furnished by the Client.

***Note: The above Sample satisfies the requirement of Zone – 1 as per Table 4 of IS-383 – 2016***

**For Karnataka Material Test House Pvt Ltd.,**

Prepared & Checked By
Nagaraj K.S

Approved By
Narayanswamy.B

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# Karnataka Material Test House Pvt. Ltd.,

Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q


| Report No: KMTH/Cement/140/2020-21 | | Date | 28.01.2021 |
|---|---|---|---|
| **PHYSICAL TEST REPORT ON CEMENT** | | | |
| Name of Client | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. | | |
| Name of Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. | | |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division | | |
| Job Code No | 003-20-000070 | | |
| Letter dated | 25.01.2021 | | |
| Sample Received on | Supplied by the Client | | |
| Source of Sample | Supplied by the Client | | |
| Date of Testing | 27.01.2021 | | |
| Type of cement & Brand of Cement* | *OPC Cement –ACC-43 Grade* | | |
| Technical Reference | IS: 403(Part I–VI) 1988 (Reaffirmed–2000) & IS: 8112-1989 | | |

***Physical Properties***

| Sl. No. | Test Conducted | Results | IS: 8112-1989 Stipulation | Remarks |
|---|---|---|---|---|
| 1 | Normal consistency in % | 36 | Not specified | - |
| 2 | Initial setting time in minutes | 165 | Shall not be less than 30 minutes | P |
| 3 | Final setting time in minutes | 319 | Shall not be more than 600 minutes | P |

*As Furnished by the client
P : Passes IS requirement
F: Fails IS requirements
TTC : Test to be conducted

For Karnataka Material Test House Pvt. Ltd.,

Prepared & Checked by
Nagaraj K.S.

Approved by
Narayanswamy.B

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Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

| Report No: KMTH/Steel/141/2020-21 | Date of issue | 22.01.2021 |
|---|---|---|

**PHYSICAL TEST REPORT ON STEEL Reinforcement BARS**

| | |
|---|---|
| Name of Client | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Job Code No | 003-20-000070 |
| Source of Sample | Supplied by Client |
| Sample Received on | 18.01.2021 |
| Nature of Sample* | Steel – 3Nos.(8,10,12mm) |
| Grade of Steel* | Fe-500 TMT Bars |
| Technical Reference | IS: 1786 – 2008 & IS: 1608–2005 |

***Tensile Test***

| Sl No. | Grade of Steel | Dia (mm) | Weight / unit length (kg/m) | 0.2% proof Stress (N/mm2) | Tensile Strength (N/mm2) | Percentage Elongation (on 5.65 √AG.L) | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | Fe-500 TMT Bars | 8 | 0.395 | 506.970 | 549.657 | 30.890 | Passes |
| 2 | | 10 | 0.625 | 509.615 | 531.360 | 28.984 | Passes |

***Bend Test***

| Sl. No. | Dia (mm) | Mandrel diameter | Angle of bend | Observations |
|---|---|---|---|---|
| 1 | 8 | 4 dia | 180° | No cracks observed. Passes the test. |
| 2 | 10 | 4 dia | 180° | No cracks observed. Passes the test. |

***Re-bend Test***

| Sl. No. | Dia (mm) | Mandrel diameter | Observations |
|---|---|---|---|
| 1 | 8 | 5 dia | No cracks observed. Passes the test. |
| 2 | 10 | 5 dia | No cracks observed. Passes the test. |

* As furnished by the Client

For **Karnataka Material Test House Pvt Ltd.,**

Prepared & Checked by
Nagaraj K.S

Approved By
Narayanaswamy.B

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# Karnataka Material Test House Pvt. Ltd.,

Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

| Report No. : KMTH/Cubes-147/2020-21 | Date of issue | 08.01.2021 |
|---|---|---|

**TEST RESULTS ON CONCRETE CUBES**

| | |
|---|---|
| Name of Client and Address | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of the Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Job Code No | 003-20-000070 |
| Letter Dated | 06.01.2021 |
| Source of Sample | Supplied by the Client |
| Dimension of Specimens | 150.00mm x 150.00mm x 150.00mm<br>150.00mm x 150.00mm x 150.00mm<br>150.0 0mm x 150.30mm x 150.00mm |
| Grade of Concrete * | M-10 |
| Chainage in Meters | **9TH Cross LHS Ch:0.00 - 27.6m** |

Compressive Strength test as per the guidelines of IS: 516-1959 has been conducted on the concrete cube specimens, supplied by the client and the results are tabulated here below:

| Sl. No | Cubes pertaining to the concrete cast at* (Details of structural member identification) | Date of casting* | Date of Testing | Age of Concrete on the date of test** (Days) | Contact Area ($mm^2$) | Weight of Specimen (gm) | Load in KN | Compressive Strength In $N/mm^2$* |
|---|---|---|---|---|---|---|---|---|
| 1 | PCC Concrete (Drains) | 06.01.2021 | 13.01.2021 | 07 Days | 22500 | 8001 | 249.75 | 11.10 |
| 2 | | 06.01.2021 | 13.01.2021 | | 22500 | 8200 | 252.45 | 11.22 |
| 3 | | 06.01.2021 | 13.01.2021 | | 22545 | 8010 | 247.09 | 10.96 |

1 N/Sq.mm = 10Kg/Sq.cm. (Approx.). *As Furnished by the client

**Based on the data furnished by the client

Note: A minimum of three cube specimens shall be supplied for testing as per IS: 516-1959.

**For Karnataka Material Test House Pvt. Ltd**

Prepared & Checked by
Nagaraj K.S

Approved by
Narayanswamy R

Karnataka Material Test House Pvt. Ltd. Bangalore

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Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

| Report No. : KMTH/Cubes-142/2020-21 | Date of issue | 29.01.2021 |
|---|---|---|

## TEST RESULTS ON CONCRETE CUBES

| | |
|---|---|
| Name of Client and Address | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of the Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhivrudi Bhavan, 4th and 5th Floor,<br>Ananda Rao circle, Bangalore - 560009. |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Job Code No | 003-20-000070 |
| Letter Dated | 22.01.2021 |
| Source of Sample | Supplied by the Client |
| Dimension of Specimens | 152.60mm X 151.60mm X 152.06mm<br>152.55mm X 152.61mm X 149.92mm<br>151.20mm X 148.69mm X 151.26mm |
| Grade of Concrete * | M-20 |
| Chainage in Meters | **Ch : 0.0 to 27.6 - 9th Cross LHS** |

Compressive Strength test as per the guidelines of IS: 516-1959 has been conducted on the concrete cube specimens, supplied by the client and the results are tabulated here below:

| Sl. No | Cubes pertaining to the concrete cast at* (Details of structural member identification) | Date of casting* | Date of Testing | Age of Concrete on the date of test** (Days) | Contact Area ($mm^2$) | Weight of Specimen (gm) | Load in KN | Compressive Strength In $N/mm^2$* |
|---|---|---|---|---|---|---|---|---|
| 1 | Raft Concrete (Drains) | 22.01.2021 | 29.01.2021 | 7 Days | 22500.00 | 8320 | 419.2 | 18.63 |
| 2 | | 22.01.2022 | 29.01.2022 | | 22500.00 | 8326 | 422.2 | 18.76 |
| 3 | | 22.01.2023 | 29.01.2023 | | 22500.00 | 8342 | 420.6 | 18.69 |

1 N/Sq mm = 10Kg/Sq cm. (Approx.) *As Furnished by the client

**Based on the data furnished by the client

Note: A minimum of three cube specimens shall be supplied for testing as per IS: 516-1959.

**For Karnataka Material Test House Pvt. Ltd**

Prepared & Checked by
Nagaraj K.S

Approved by
Narayanaswamy.B

Karnataka Material Test House Pvt. Ltd. Bangalore

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Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

| Report No. : KMTH/Cubes-143/2020-21 | Date of issue | 19.02.2021 |
|---|---|---|

**TEST RESULTS ON CONCRETE CUBES**

| | |
|---|---|
| Name of Client and Address | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of the Agency | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhivrudi Bhavan, 4th and 5th Floor,<br>Ananda Rao circle, Bangalore - 560009. |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Third Party Consultant | Karnataka Material Test House Pvt Ltd.,<br>Basaveshwara Layout, Nagashettihalli, Bengaluru-560094 |
| Job Code No | 003-20-000070 |
| Work order Number | BBMP/EE/YNK.D/W.O/187/2019-20 |
| Letter Dated | 22.01.2021 |
| Source of Sample | Supplied by the Client |
| Dimension of Specimens | 151.62mm X 151.62mm X 150.80mm<br>150.00mm X 152.10mm X 150.48mm<br>151.41mm X 150.14mm X 150.82mm |
| Grade of Concrete * | M-20 |
| Chainage in Meters | **C h. 0.0 to 27.6 - 9th Cross LHS** |

Compressive Strength test as per the guidelines of IS: 516-1959 has been conducted on the concrete cube specimens, supplied by the client and the results are tabulated here below:

| Sl. No | Cubes pertaining to the concrete cast at* (Details of structural member identification) | Date of casting* | Date of Testing | Age of Concrete on the date of test** (Days) | Contact Area ($mm^2$) | Weight of Specimen (gm) | Load in KN | Compressive Strength In $N/mm^2$* |
|---|---|---|---|---|---|---|---|---|
| 1 | Raft Concrete (Drains) | 22.01.2021 | 19.02.2021 | 28 Days | 22500.00 | 8216 | 610.2 | 27.12 |
| 2 | | 22.01.2021 | 19.02.2021 | | 22500.00 | 8220 | 605.4 | 26.91 |
| 3 | | 22.01.2021 | 19.02.2021 | | 22500.00 | 8212 | 608.7 | 27.05 |

1 N/Sq.mm = 10Kg/Sq.cm. (Approx.). *As Furnished by the client

**Based on the data furnished by the client

Note: A minimum of three cube specimens shall be supplied for testing as per IS: 516-1959.

For Karnataka Material Test House Pvt. Ltd

Checked & Checked by
Nagaraj K.S

Approved by
Narayana

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Soil Investigation, Concrete and NDT Testing ,Topo Survey, & Project management Consultancy

CIN No: U74210KA2004PTC035137 G S T No: 29AACCK4994Q1ZI PAN No: AACCK4994Q

Report No.: KMTH/Slabs/152/2020-21 Date of Issue: 16.02.2021

**TEST RESULTS ON 100MM THICK CEMENT CONCRETE SLABS SAMPLES**

| | |
|---|---|
| Name of Client & Address | Executive Engineer<br>Bruhat Bengaluru Mahanagara Palike<br>Yelahanka Division, CMC Road,<br>Yelahanka Old Town, Bengaluru-64. |
| Name of Agency & Address | Technical Director<br>Karnataka Rural Infrastructure Development Limited,<br>Grameenabhirvudi Bhavan, 4th and 5th Floor, Ananda Rao circle, Bangalore - 560009. |
| Name of the Project* | Construction of RCC Drains & Culverts at BHEL Layout And Ayyappa Layout And Surrounding Area in Ward No.3, Yelahanka Satellite Town Sub Division |
| Third Party Consultant | Karnataka Material Test House Pvt Ltd.,<br>Basaveshwara Layout, Nagashettyhalli, Bengaluru-560094 |
| Work order Number | BBMP/EE/YNK.D/W.O/187/2019-20 |
| Job Code No | 003-20-000070 |
| Sample Received on | 16.02.2021 |
| Source of Sample | Supplied by the Client |
| Number of Specimens* | 3 No`s Cement Concrete Slabs |
| Size & Shape of Sample | slab Length -920mm, Height-100mm,Width600mm |
| Date of Testing | 24.01.2020 |

Compressive Strength test as per the guidelines of IS. 516-1959 has been conducted on the concrete Core Samples extracted and the results are tabulated here below:

| Sl No | Cores pertaining to the concrete cast at*(Details of structural member identification) | Diameter in mm | Length in mm | H/D Ratio | Area Sq.mm | Load KN | Comp. Strength. N/Sq.mm | C.F. H/D x 0.11 + 0.78 | C.C.F N/Sq.mm | E.C.S.C N/Sq.mm | Avg. N/Sq.mm | Weight of Core in kg | Volume of Core, m3 | Density, Kg/m3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S-01 | 95.00 | 100.00 | 1.05 | 7085 | 126.0 | 17.78 | 0.90 | 15.93 | 19.91 | 20.04 | 2.2360 | 0.00071 | 3156.13 |
| 2 | S-02 | 94.00 | 98.60 | 1.05 | 6936 | 122.0 | 17.59 | 0.90 | 15.75 | 19.69 | | 2.4220 | 0.00068 | 3541.37 |
| 3 | S-03 | 95.00 | 99.00 | 1.04 | 7085 | 130.0 | 18.35 | 0.89 | 16.42 | 20.52 | | 2.1926 | 0.00070 | 3126.13 |

*As furnished by the Client

Remarks:

**For Karnataka Material Test House Pvt. Ltd.,**

Prepared & Checked by
Nagaraja K S

Approved by
Narayanswamy B

End of Report

Note: 1) This report is not to be reproduced except in full without our prior permission in writing.
2) The results listed refer only to the tested samples and applicable parameters.
3) Any Correction in this report will this report Invalid

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